Pikant & Naumof
Hot Knowledge Cool Thinking

NICOLAE NAUMOF

IT MAKES NO SENSE

BETWEEN THE JOY OF GAINING AND FEAR OF LOSING

SCIENCE, NOT MAGIC

a foreword from

brainjuicer

IT MAKES ~~NO~~ SENSE

BETWEEN THE JOY OF GAINING AND THE FEAR OF LOSING

Free Sample

This is a free sample of the book *It Makes ~~No~~ Sense: Between the Joy of Gaining and the Fear of Losing*.

Get the complete book
It Makes ~~No~~ Sense: Between the Joy of Gaining and the Fear of Losing

Dedication

To Cornelia, my wonderful and loving wife. To my parents and extended family.

This book exists because of your support.

Foreword

Behavioral economics is undergoing a surge in popularity right now – but it also draws on several decades of work and thousands of different studies. So if you're a marketer, researcher, educator or anyone else wanting to use it, it can seem temptingly new and forbiddingly complex at the same time. The world of human behavior needs guides. And even more importantly, it needs structure.

At BrainJuicer, when we started looking at how to turn the human understanding in behavioral science into business advantage for our clients, we quickly realized two things. First, this stuff was the real thing. The world of marketing is crammed with minor innovations and mayfly buzzwords. New apps are "game-changers"; watching a show on an iPad not a TV is a "paradigm shift". But if you want a real paradigm shift, look no further than Kahneman and Tversky's Prospect Theory, which shattered long-standing economic assumptions by proving that humans aren't rational about losses and risks. Behavioral economics and psychology were full of ideas that traditional marketing had only taken partial account of, at best.

The second thing we realized is that there were simply too many of these ideas to use effectively unless you roped them into some kind of structure. We put together a "behavioral model", based on environmental, personal and social factors that influence behavior, and started talking about behavior to our clients in those terms.

That's when Nicholas Naumof got in touch with us. He had also realized that the wild landscape of decision science needed a bit of shaping, and had independently come up with a model of behavior along similar lines – adding a fourth dimension, personality, into the mix. What's more, Nicholas was writing a book about it.

This is that book, and it's a very valuable contribution to the literature on how people behave.

In It Makes (No) Sense, Nicholas doesn't just add structure to your ideas about how people think and decide, he also adds a lot of background information and plenty of great and very human examples. He's comfortable relating advances in psychology to our evolutionary origins and goals, but just as good at creating compelling stories about how they affect our day to day lives. In its 75 chapters he will introduce you to a host of different psychological and behavioral effects – and just as importantly, how they fit together into a "4D model" of human decisions.

Oh, you might say, I've already read this bestseller or that one on decision making – why do I need another book? But you'd be wrong. For one thing, there's so much in here you'll surely learn something new. For another, Nicholas cares too much about this topic to simply repeat the hype. In fact, his final chapters – about how important experimentation is to behavior change, and what you can expect when you try to create it – are probably the most vital in the whole book. His message is simple: this is science, not magic, and it's only by understanding why effects happen, and testing

your interventions, that you can hope to create consistent change. It's something we try to do at BrainJuicer too – and (sneak preview!) you can see if we manage it in Chapter 42!

Enjoy this book, and thanks Nicholas for writing it.

The BrainJuicer Behavioural Change Consultancy

Introduction

It Makes ~~No~~ Sense

I ask of you to make an exercise of imagination and think that you are a medical doctor in the city of Vienna at one of the world's best hospitals. You are a true gentleman, member of an elite profession with outstanding education and highly respected by the entire society. You have spent many years learning medicine and you exercise your profession in good faith, doing what you know is best for your patients. You strive to fulfill your duties to the best of your capabilities. Your goal is to make people healthy again and, if the case, save their lives. Despite of your best efforts, some of your patients die. You think that this is *the way of nature* and even *God's will*. After all, not everyone can be saved even if you apply the best of your knowledge in medicine.

The year is 1849 and Vienna is the capital of one of the world's most powerful empires. Naturally, the hospital in Vienna has the best physicians in (central) Europe. Many smart and highly educated people are practicing the noble science of medicine. However, there are some diseases that can't be cured and one of them is *childbed fever* which kills many women very soon after they gave birth. Despite the fact that the women who gave birth in this world-class hospital benefited from the care of some of the best doctors of the time, many of them (up to one third) die soon after their children were born. This must be *the will of God* or just *nature's way*, since even the best doctors in the empire can't help the new mothers. Certainly this condition - *childbed fever* – is caused by something that is beyond human understanding. It must have some cosmic origins.

If you detect something that is not quite as it should be, do not forget that it is the year 1849.

One of your colleagues, a fellow doctor, who works in one of the maternity units of the hospital, has a wacky idea that *childbed fever* can be prevented. This is a bit

awkward since the condition is *known* to be *the way of nature*, the *price* that nature sometimes asks for bringing a new life into the world. This weird doctor is Ignaz Philipp Semmelweis. He made the students and trainee doctors who are under his supervision to perform an unusual activity in the middle of their daily routine. Usually, doctors, students and trainee doctors would work on the cadavers in the basement of the hospital. (Cadavers were, and still are, used for teaching and research purposes). Afterwards they would perform their work with (living) patients. The wacky doctor Ignaz Philipp Semmelweis asked his students and trainee doctors to do something very unusual and that *made absolutely no sense* exactly after finishing the work with the cadavers and just before starting their patient duties. He asked them to wash their hands (with chlorinated lime solutions). The students and trainee doctors were surprised by the unusual request. They couldn't understand why doctor Semmelweis would ask them to do this since *it made absolutely no sense*. (Remember, the year is 1849). Some of the trainee doctors complained to the hospital's management and an investigation was launched since the wacky doctor has created a new protocol and established new rules without the express approval of the management.

Doctor Semmelweis told the hospital's management board that he noticed that when he washed his hands before working with the women in the maternity, the number of women who got *childbed fever* decreased dramatically from about 30% to about 1%. He also said that he asked his students and trainee doctors to do the same and that this rule of washing hands before working with patients should be introduced to the entire hospital.

The board wasn't very happy with this outrageous suggestion and asked doctor Semmelweis to give an explanation. The doctor could only say that *cadaveric particles* on the doctors' hands would cause *blood poisoning* to the women in the maternity. This made no sense to the doctors in the hospital management, since doctors by their very nature could not have dirty hands as factory workers and farmers had. They were true gentlemen. How could they be the cause of a disease which is due to cosmic influences? Clearly doctor Semmelweis is not in his right mind anymore.

Let's leave the mid-nineteenth century Vienna and come back to today.

For you *it makes no sense* that for the doctors in the board of the hospital *it made no sense* to wash their hands before working with (live) patients. This is because you know that bacteria exist. You have the notion of bacteria and of micro-biology. The doctors in those days didn't have these notions. For them such things simply didn't exist and naturally since they didn't exist they can't cause *childbed fever* or any other disease.

This was true also for doctor Ignaz Philipp Semmelweis. He had no notion of bacteria or micro-biology; he used the term of *cadaveric particles*. 1849 was twenty years before the recognition of Louis Pasteur's work on micro-biology and its applications in medicine.

The doctors in the board of the Vienna Hospital were acting *to the best of their knowledge*. Can you blame them for not knowing something that wasn't known by anyone? For them, it actually *made no sense* to wash their hands since they did not know that bacteria (on their hands) existed. The (only) reasonable explanation was that Ignaz Philipp Semmelweis has gone crazy.

In fact, Ignaz Philipp Semmelweis was fired from the hospital in Vienna and soon after was committed into a mental asylum where, fourteen days later he was beaten to death by the guards. Ignaz Philipp Semmelweis died being considered mad, with shame instead of glory. Only twenty years after his death his work received the proper merit.

Earlier I said that the doctors on the board of the Vienna Hospital can't be blamed for not knowing something that was not known by anyone. What they can be blamed for is: not knowing that there are things they don't know. They can be blamed for holding too firmly to their existing beliefs and giving too much credit to the mystic explanation. They can be blamed for not accepting that they are not omniscient, that they didn't accept that they can make mistakes or simply hold invalid opinions. They can be blamed for Ignaz Philipp Semmelweis dying in disgrace, but most importantly they are to be blamed for all the women who died from *childbed fever* in between the time that they rejected Semmelweis's proposition and the time it was finally accepted that washing hands before working with patients *makes sense*.

The story of Ignaz Philipp Semmelweis is a sad and bitter one. His story tells us that we should know that there are many things we don't know. His story tells us that it may very well be the case that what we think *makes no sense*, in fact, *makes all the sense in the world* once you add a bit of (missing) knowledge.

This book aims at giving you some of the missing knowledge so that you can take out the *No* from: it *makes no sense*… at least in the area of human behavior and decision making… Next you can read two illustrations on how adding a piece of knowledge can remove the *No* from: it *makes no sense.*

On the Banks of River Inn

In the heart of Europe, on the banks of the river Inn there are two very beautiful small towns - *Neuhaus am Inn* on the west bank of the river and *Schärding am Inn* on the east bank. These two small towns are connected by an old stone bridge which makes the crossing of the river a short walk. In *Neuhaus* live approximately 3700 people, while *Schärding* has around 5000 inhabitants. Both towns have economies based on agriculture and forestry, light industry and a bit of tourism. Since the scenery is beautiful and both towns are quiet, some tourists populate the hotels in the two towns.

The people living in *Neuhaus* and in *Schärding* shared a lot of history and during the centuries people from the two towns have formed friendships and business relationships. Some people from *Neuhaus* married people from *Schärding* and vice versa. The forming of business relationships, friendships and romantic relationships

is only natural since the people living in the two towns are so close and can cross the river in a few minutes. Moreover, on both banks of the river Inn people speak German and the majoritarian religion is Roman Catholic, thus close interaction between the two populations is only natural.

Up to now you have learned that *Neuhaus am Inn* and *Schärding am Inn* are two small and somehow boring towns on the banks of the river Inn that are connected by a bridge. Not surprisingly, people from the two towns have formed social and business relationships. This was facilitated by proximity and by the commonalities of language and religion. Up to this point everything seems natural and a bit dull. But what if I tell you that there is one aspect on which the people in the two towns on the river Inn are significantly different?

Out of the 3700 people in *Neuhaus* only about 12% are registered as organ donors, whereas virtually all the 5000 people in *Schärding* are registered as organ donors. Apparently *it makes no sense*. How come two populations that are very similar, very close to one another and highly interconnected can be so different on the feature of being or not an organ donor? Is the river Inn a separation between people who are highly prosocial and even a bit altruistic (in *Schärding*) and people who, in their large majority, are less prosocial and even a bit selfish (in *Neuhaus*)?

As you have learned earlier, quite often adding a bit of knowledge can take away the *No* from: *It makes no sense.* Here is one piece of missing information: the river Inn is the (natural) border between Germany and Austria. *Neuhaus am Inn* is in Germany while *Schärding am Inn* is in Austria. *Does it make* more *sense* now to see this huge difference in terms of enrollment in organ donation programs? The similarities between the two towns are still there and the existing social relationships didn't vanish in thin air. *Neuhaus am Inn* is more similar to *Schärding am Inn* than it is similar with Berlin (the capital of Germany). Similarly *Schärding am Inn* is more similar to *Neuhaus am Inn* than it is similar with Vienna (capital of Austria). Moreover, Germany and Austria have quite similar cultures and the small difference in culture cannot account for the huge difference in enrollment rates in organ donation programs.

Apparently *it makes no sense*. This is because we assume that the decision to enroll or not in an organ donation program is independent of context and depends only on one's values, character and is the outcome of a conscious and deliberate thinking process. However, once we drop this assumption and accept that quite often decisions and behaviors are not independent of context, it starts to make sense. The explanation for the huge difference in enrollment rates in organ donation programs has quite little to do with differences in individual values, character and deliberate thinking. It has to do with the policy on organ donation. In Germany people are presumed non-donors and who wants to enroll has to actively do so – opt in. In Austria people are presumed donors and who wants to not be an organ donor has to actively drop out of the program – opt out. In both countries the large majority of people do nothing, but the outcomes are very different. Knowing this removed the

No from: *It Makes No Sense*. If you are extremely curios on this topic, you can jump ahead to chapter sixty.

The Ideal Couple?

Mark is a young man, nineteen years of age who comes from a good family. He recently graduated from a very good high school in his city and is now a first year student at a prestigious university. His parents taught him good manners and in general his behavior is what you would expect from a well-mannered young gentleman. Some of his colleagues joke that Mark knows how to use more forks than all his colleagues combined. His knowledge and experience with etiquette rules brought him the nickname *the aristocrat*.

During the first year of university studies, Mark met Sophie, a colleague, and they dated a few times. Sophie was surprised and delighted to discover that Mark treats her like a true gentleman would. She was impressed by his good manners and was happy to find a bit of sophistication in a man as young as her. Sophie was happy to find a boyfriend who enjoys going to theater plays and who is not a stranger when it comes to art galleries. On their dates the topics of discussion go beyond what she was used to from previous boyfriends and she is really happy that she finally found someone with whom she can actually have an intellectually enjoyable conversation.

When it comes to the physical part of their relationship, Sophie and Mark tacitly agreed to take things slow. They kiss, hold hands, hug and even share some intimate moments, but nothing too sexually intense. Both of them are comfortable with this and neither of them wants to spoil things by rushing into the physical part.

After a round of exams, Sophie and Mark decide to spend a week-end together. They haven't seen each other too much in the last weeks since they had to study, so they think that a week-end together would be a very nice way of catching up. They start their micro-holiday with a Saturday afternoon long walk in a very beautiful park. They both enjoy it since a bit of nature is more than welcomed after spending many days inside reading textbooks and course handouts. Mark wanted to surprise Sophie and he decided to cook something special. Among other qualities, Mark knows how to cook a few nice dishes he learned from his father who is an *amateur chef*. All Saturday morning Mark cooked and when they will get back to his studio he will only need to warm the main course and add some final touches to the side dish. He worked very hard to prepare the meal and he hopes Sophie will enjoy dinner.

While cooking the nice meal, Mark was thinking that maybe this evening he and Sophie will (finally) have sex. Their relationship has been going very well and this weekend spent together might be a good opportunity to *take their relationship to the next level*. At the same time, Mark is aware that Sophie might not share his thoughts and that she might want to wait a bit more before their relationship becomes sexual. Mark likes Sophie very much and he enjoys very much their relationship even without sex. He decides to let things follow their natural course and if Sophie too will want to have sex on that evening then it will be so; if Sophie will be reluctant, he will act like the young gentleman he is and respect her wish.

The walk in the park goes wonderful and as the sun sets Sophie and Mark walk to his studio. On their way, Mark said that he was thinking of ordering pizza for dinner and Sophie accepted the suggestion. However, when they went into the studio, she was really impressed to see the table arranged for a romantic dinner. Mark told Sophie to relax as he has to make some final touches on dinner. Their romantic dinner goes smoothly and Sophie is really impressed by Mark's cooking skills. They go and sit on the couch and enjoy a glass of wine.

Not surprisingly Sophie and Mark start kissing and sharing some intimate moments. Things heat up, in fact, they get hotter than they ever were. You get the idea, right? At one very heated point (not going into too many details, just use your imagination) they end up almost naked. Sophie, however, has a change of heart / mind and says that they should stop since she needs a bit more time before their relationship becomes sexual.

You remember that earlier that day Mark thought what he would do if Sophie would not agree to have sex that evening. He would act like a gentleman and respect her wish. After all, he doesn't want to damage or even jeopardize their relationship.

In reality, however, Mark kept trying to have sex with Sophie even after she said that she needs more time before their relationship becomes sexual. At first, Sophie tried to gently appease Mark, but he kept insisting and their evening ended up with a not so nice fight on respecting one-another. What was supposed to be an enjoyable evening and nice weekend together ended up as a fiasco with Sophie leaving Mark's place late at night.

On Monday, Mark apologized to Sophie for acting in a very un-gentlemanly manner. He couldn't explain his actions and he truly felt sorry for upsetting his girlfriend. For Mark, his behavior from the previous Saturday night was hard to explain. Moreover, he knows that he decided on that Saturday morning to respect Sophie's wish if she said no and he actually intended to do so. The fact that he didn't stop trying to have sex with her even after she said *NO makes no sense* to him.

For Sophie things were even more paradoxical and hard to explain. She was wondering how it could be that Mark, who has always behaved like a true gentleman, who is so kind and who understands and respects her so much, behaved like a *horny dog*. For her it seemed like on Saturday evening Mark didn't even hear what she said or he didn't care too much for her feelings. Could it be that everything they had, their entire relationship was just an act? Could it be that, in fact, Mark is not the wonderful close to perfect young gentleman, but just another *pig*? Sophie realizes that very likely Mark is not *a wolf disguised as a sheep*, since up to last Saturday he behave almost perfectly and for quite some time. A *disguised predator* would have given up after one or two weeks if she would have had refused him. Sophie has feelings for Mark and she doesn't want to break-up with him, but his behavior last Saturday evening *makes no sense*.

For both Sophie and Mark *it makes no sense* because there is a bit of knowledge missing. This knowledge refers to changes in behavior due to visceral influences. In brief, when a person is under the influence of a visceral factor (*hot state*), such as sexual arousal in the case of Mark and Sophie, the behavior exhibited by the individual goes beyond what is generally considered to be reasonable. The person who is in a *hot state* will become more self-centered and will focus on alleviating the current state without giving too much thought to future consequences.

The particular case of sexual arousal and keeping trying to have sex after the partner said *no*, was investigated in an academic study by professors Ariely and Loewenstein. The study discovered that people who were sexually aroused (hot state) rated *keeping trying to have sex after the partner said no* more than twice as acceptable than did people who were in a cold state.

The physical state one is in dramatically influences one's judgment and subsequent behavior. Knowing this removed the *No* from: *It Makes No Sense*. If you are extremely curios on this topic, you can jump ahead to chapter thirty one.

Why *It Makes No Sense*? – Illusion of Linearity

Earlier I've told you that in order to remove the *No* from *It Makes No Sense* you need to add (some) knowledge. In the story with *childbed fever* the doctors from the hospital in Vienna should have added the knowledge that dirty hands can be (are) the source of the disease; or at least the knowledge that they don't know everything. In the example with the two towns on the river Inn the missing piece of knowledge was that what option is preselected as the default significantly influences what people choose. In the story with Mark and Sophie the missing piece of knowledge was that sexual arousal strongly influences behavior – in their case insisting to have sex after she said *No*. All these are very important pieces of (missing) knowledge and this book contains a lot of knowledge that will allow you to remove the *No* from *It Makes No Sense*. However there is one fundamental piece of knowledge that underlies the removal of the *No* so that *It Makes Sense* and this piece of knowledge is that *the world is not* (always) *linear*. In order to get a good understanding of (real) human behavior you need to acknowledge (accept) that small and apparently irrelevant changes in the input or in the environment have huge impact on the outcome – in this case behavior.

We humans are used to linearity and there are many reasons why we tend to see everything around us in a linear way. We believe that big problems require big, complicated and often expensive solutions. We believe that large outcomes are achievable only with large inputs. Reality is that in some cases this is true, but not in all cases. It is no wonder that big problems such as global warming, poverty and civil

war require complex and expensive solutions. But not all (relatively) big problems can be solved solely by complex, big and costly means. I'll get back to this a bit later.

Much of our evolutionary heritage favors linearity. Think of the biggest invention of human kind (after the toilet) – agriculture. By switching from a hunter-gatherer way of life to agriculture our very distant ancestors made it possible for the human civilization to develop. Almost everything we know it exists in the early XXIst century exists simply because our very distant ancestors started cultivating plants and domesticating and raising animals. Of course further progress contributed to the development of the civilization, but if food would not have been cultivated we would have lived more or less like our ancestors from fifty thousand years ago. Moreover, the huge progress made in human civilization starting from the mid nineteenth century up to now (2013) is due to mechanized modern agriculture. Our ancestors from two hundred years ago spent most of their lives working to get food. With the development of modern agriculture and the introduction of mechanized tools, pesticides, herbicides, refrigeration etc. many of us don't spend more than a few hours a week on acquiring food. This unlocked huge resources in terms of man-power and brain power which were allocated to developing most of what we take for granted such medicine, furniture, computers, cars, roads etc.

Going back to (archaic) agriculture, what is very interesting about it is that, overall, it is a linear process. The crop one harvests depends on the amount of work put into. Of course, the whether plays a role, but the amount of work put into working the land is highly important for the outcome of the crop. Whether one works two or twenty hectares of land makes a huge and linear difference in the outcome (crop) the farmer will harvest. No wonder we think in linear terms.

For many of my readers agriculture might be quite distant, so let's focus on work – any kind of work. Most of what we know as work usually has a linear relationship with the outcome – may it be performance or income. School, which is the work people do before (officially) starting to work, is also linear. The more hours a pupil or student puts into studying, the higher the grade will be. I'm not saying that there are no other factors that influence the grade; I'm just saying that the amount of effort put in is positively and strongly correlated with the outcome – grade – and most often has the biggest influence on it. Things are quite the same for many professions. A dentist will earn more if she works more hours. An accountant is paid by the hour of work; so is a consultant. Many professions are linear – the more effort (work) put in the higher the outcome is. It seems quite simple and *it makes sense*. However, this is not true for every profession. There are types of work for which more effort does not necessarily lead to a better outcome. Think of professions such as painter, singer, football player etc. Do you really believe that for the top professionals (read stars) the extra hour of work actually has any influence on their performance or income? I'm not saying that people like Lionel Messi, members of Metallica or Serena Williams don't work a lot. They do. What I'm saying is that their performance and their income are not due only (mainly) to work. If a painter manages to get his work exhibited in a famous gallery, this fact will have a much bigger impact on his fame and income

than spending another ten hours on a (another) painting. Of course the paintings should be good (whatever that means), but there are thousands of good painters who never became famous and who never sold their work for tens or hundreds of thousands of Euros. Quite often small and apparently irrelevant things have huge impact on the outcome. Take the example of the painter whose work got to be shown at a famous gallery. Maybe he met the gallery manager at a party to which he was reluctant to go to since he was feeling *down* and didn't feel like talking to other people, but his girlfriend talked him into going. Going to parties when one doesn't feel social is a small and apparently irrelevant thing, but in this painter's career it played a huge role. Of course, so did luck, but that's another story.

Non-linearity is present in both the physical and non-physical (read human) worlds. To understand how non-linearity works in the physical world, take the following example. If you stand on top of a book that is ten centimeters thick and jump of it on the floor, the damage to your body is zero. This is safe to try at home and convince yourself. If you jump off from a table (that is usually ninety centimeters high, thus nine times higher than the book), the worst thing that can happen is that you get sore feet. OK. Try this on your own risk. If you jump from the first floor of a building (that would normally be about three meters – thirty times the height of the book) the damage to your body will be some sore joints and maybe some broken leg bones, but most likely you will not die from it. However, if you jump from the tenth floor, which is about thirty meters high (that is three hundred times the height of the book and about thirty three times the height of the table), it is very likely that you will die. Do not try this! Take my word for it. The interesting thing is that if you would jump from the tenth floor, the damage to your body will not be equal to the damage you would cumulatively get from jumping three hundred times from a book (ten centimeters). Neither will it be the damage your body would cumulatively get from jumping thirty three times from a table. In other words, if you jump from the tenth floor, the damage your body would suffer is not thirty three times as big as the damage you'd suffer if you would jump from a table. Even the physical world, which we usually believe to be mostly linear, is not (always) linear.

When it comes to human behavior, linearity is encountered even less than it is in the physical world. In the case of damage to your body the non-linear difference between jumping thirty three times from a table and jumping once from the tenth floor I think *it makes sense*. However, when it comes to people's behavior even small changes like jumping from a thin book (ten centimeters) and jumping from a thick book (thirty centimeters) makes a big difference.

Small can lead to big. This is the essence of the knowledge that you will acquire by reading this book. Small changes in the environment can lead to big or huge changes in human behavior. Let me illustrate this with an example from the area of deviance, cheating more accurately. When it comes to cheating the folk wisdom says that cheating is done by immoral people. This is not wrong, but it is not true either. There are people who cheat a lot and who do so without any (moral) guilt. However, the number of big cheaters is rather small and their vast media exposure makes their

presence very salient in public conscience. Most cheating, however, comes from less vicious people and this is (almost) always small scale cheating. For example, many people might say in an insurance claim that the TV that was stolen had a one meter in diagonal when it fact it had eighty centimeters. People might conveniently forget to declare an occasional income of a few hundred euros on their tax forms. All these are small scale cheats, but because many people are comfortable doing them, they cumulatively cause large damage.

When it comes to fighting fraud or cheating the general view is that the control mechanism should be stronger, that penalties should be higher and that the authorities (whoever they may be) should do their job better. I'm not going to say that tighter control and bigger penalties are useless. They have their place in the *trophic chain*… They are, however, not the only things that can contribute to solving (diminishing) the issue of cheating.

The famous behavioral economics professor Dan Ariely proposes in his book *The Honest Truth about Dishonesty* that asking people to sign at the beginning of a form (and not at the end of it) the box that says: *I have filled in this form in good faith and all the information is true etc. etc. etc.* leads to a considerable (about 75%) decrease of cheating behavior. Apparently, the exact placement of the signature box that confirms that the information filled in the form is true has nothing to do with cheating behavior. *It makes no sense* for its exact placement to play a role in people's honesty when filling in a tax form, insurance claim form or even exam paper (at Erasmus University Rotterdam students are asked to sign on the first page of the exam paper). Moreover, one might think that it is impossible for such a small and irrelevant change in the design of the form (moving the signature box from the end to the beginning of the form) to have such a large influence on cheating behavior.

In fact, *it makes sense*, but for this you need a bit of extra knowledge on how cheating behavior works. In brief, this missing piece of knowledge is that the signature box acts as a moral reminder which in turn makes people less likely to cheat. By placing the signature box in the beginning people are reminded and by signing they make a commitment to be honest and this will influence what information they provide. However, if the box is at the end of the form the moral reminder effect does not occur since people are reminded of their morality only after the information was filled in. (For more on cheating read Dan Ariely's book). But, beyond understanding the mechanism of cheating behavior, there is a much more important piece of knowledge that one has to assimilate, namely that an apparently irrelevant and small change in the environment can lead to a large change in behavior.

Earlier I have said that we believe that big problems (such as cheating and fraud) need big, complicated and expensive solutions. This is, to some extent, true. At the same time it is possible to solve a part of the problem with small, simple and inexpensive means. Keeping the example with moving the signature box from the end to the beginning of the form, this small, simple, inexpensive and apparently irrelevant change can help in tackling problems such as fraud and tax evasion. Of

course, this change in the form design will not solve the entire problem of tax evasion. But, what if it can solve five percent of tax evasion? If we take the example of my country of origin – Romania – a decrease of five percent in tax evasion could bring tens of millions of Euros to the country's budget. If an inexpensive and simple change in how tax forms are designed can lead to an increase of, say, ten million euros in collection of unpaid taxes, then that is something truly remarkable. This small change will not solve the entire issue of tax evasion, but it will help in solving it and will do so with very little costs.

Naturally, tax evasion (or cheating in general) is not the only big problem that can be partly solved by small, inexpensive and smart changes in the environment. Think of health problems due to overweight and obesity. Things like rearranging food in (school) cafeterias so that picking up the healthier food is made easier will not solve the entire problem of overweight, but it will help and it can translate in lower (future) expenses with medical care. Similarly, climate change will not be solved by discouraging people to use their cars in cities, but it will help reduce carbon emissions.

What I hope you will get out of this book is, on one hand, in-depth knowledge on what drives (influences) human behavior and, on the other hand, I hope you will be able to influence human behavior for the good. None of us alone can fully solve big problems, but small, inexpensive interventions can contribute to the solutions for big problems.

So That It Makes Sense, See Human Behavior in 4D

Marketers as well as other business professionals have to work with or for clients, customers, consumers, potential clients, target groups, people etc. Policy makers have to work for and with tax payers, voters, citizens etc. Regardless of the names we use to describe who various professionals are dealing with all day long, the naked truth is that all these terms stand for *humans*. Whether you call them customers, consumers, citizens, tax payers or anything else has no real importance. You have to work with and for *humans*.

At first glance this is trivial. I personally don't believe it is so obvious that in our daily work we deal with *humans* and my belief is based on observation, not on hunches. Too often marketers, policy makers as well as other professionals simply ignore *human nature*. I honestly hope that ignoring human nature is due to mere lack of knowledge on the topic.

The core of a marketer's job is to *understand, predict and influence human behavior*, or at least a very small part of it. Things are similar for other professions, may them be in the business sector, the public sector or in the non-profit sector. Quite often, endeavors aimed at understanding or influencing the behavior of people, clients, tax

payers, citizens, customers etc. are based on assumptions that are not fully accurate. These assumptions regard the elements that influence human behavior and human judgment.

The general assumption is that human behavior is the result of the interaction between *cold-reasoned judgment* and the *personality* or *character* of the individual. Quite often we believe that our customers, colleagues, citizens or simply people around us are very similar to *Mr. Spok* from the *Star Trek* series. We believe that people are some sort of *reasoning machines*. To some extent this is true, in the sense that humans are capable of wonderful reasoning. Looking at the modern world we live in, we should acknowledge that the buildings we live and work in, the bridges that we cross to get from here to there and the myriad of high-tech tools we use every day are the product of cold-rational reasoning. However, most of human life is not guided by this type of thinking. In fact most of human thinking is based on the so called rules of thumb or in more sophisticated terms – *heuristics*. When we go to buy a pair of jeans or groceries we do not engage in very elaborate thinking. We simply want jeans that fit well and look good. We want to get it over with shopping for groceries and get back home to watch the football game or play with our children. When your colleague goes to make some photocopies, very likely she has something else on her mind and presses the buttons of the photocopying machine without giving it too much thought. Her goal is to get things done and not to maximize the efficiency of using ink and paper in the office, even if the boss told everyone to be careful with the office supplies because the firm needs to cut costs.

The second source of human behavior that is established in popular belief is the *character* or *personality* of the individual. We infer that what a person does is the reflection of her character. We believe that *bad things are done by bad people* whereas *good things are done by good people*. To a limited extent this view is correct. Indeed, there are individual differences among people and they are valid predictors of human behavior. However, these individual differences are good at predicting patterns of behavior and not instances of behavior. For example, personality traits such as *conscientiousness* do predict professional success which is a long term pattern of behavior. At the same time, this personality trait is not a very reliable predictor of an instance of behavior such as the quality of a presentation given in a certain day at work.

Much of marketing related activities are centered on getting to know who the customer is; to create a profile of the prototypical client. Subsequently the marketers will adapt the product, the distribution, the communication etc. to fit with the prototypical client.

In essence, there isn't anything wrong with that. However, this approach is incomplete. If the marketer's job is to *understand, predict and influence consumers' (humans') behavior*, the marketer should know that human behavior is not determined only by who the person is. In fact, personality is the weakest predictor of instances of human behavior. We tend to believe that what we do is determined

(solely) by *who* we are, but this is not the case. A few paragraphs later, I will present the other sources of human behavior. If marketers, or any other professionals that want to understand and influence human behavior, focus only on *who* the *customer is* and subsequently adjust their offering, they ignore influencing behavior through other means.

Let me illustrate with an example how factors other than personality influence behavior. Imagine Dana, a young ambitious person. Her boss asks her to give a presentation to some very important prospective clients. Her boss decides to give this responsibility to Dana because she is very hard working, methodical and somehow perfectionist. In personality jargon this would be translated in *Dana has a very high score on the personality trait conscientiousness*. However, Dana's presentation is less than satisfactory and her boss is unhappy. Do you think that Dana's score on *conscientiousness* suddenly decreased? The answer is clearly *no* and Dana is as hard working and methodical as she ever was. The explanation for her unsatisfactory performance lies in what has happened in the previous days. Two days ago, as she was working on the presentation three colleagues came and asked her to join the celebration of another co-worker. Dana was reluctant because she still had to work on the presentation. However, her colleagues insisted and told her that she is not a good team mate if she doesn't join the celebration; that members of the team have to properly honor their colleagues on their birthdays. Dana decided that she could finish the presentation the next day and joined her colleagues. The next day some unexpected emergencies arose at the office and she couldn't finish the work. She would have stood over time, but she had a date with a nice guy and she had already postponed their date three times. Dana decided to go on the date and get home early so that she could wake up at 4 A.M. to finish the presentation. Unfortunately, Dana got a really bad indigestion from the sea-food she had on her date and could barely sleep. She did some work on the presentation between two instances of sickness. Just as Dana got to the office, she received a call from father learning that her mother is ill and was admitted into hospital. As you can see, nothing has changed in Dana's personality. However, situational factors are quite often more powerful than someone's character.

My approach on *understanding, predicting and influencing human behavior* is based on a model that includes four major factors that influence human behavior. I call it the *4 Dimension Model of Human Behavior*. One of the dimensions is *Personality*. Although it is not a very powerful predictor of instances of behavior, personality is a reliable source of long term patterns of behavior. The other three dimensions are *Social Influences*, *Personal Internal State* and *Physical Environment*.

Earlier on, I have emphasized on *human nature* and one major characteristic of it is that humans are *social beings*. We live in organized societies and each of us has our relevant others such as family, friends, rivals, co-workers, people who we admire and people who we despise. As social beings, humans are influenced by the social environment. When we are in a novel or ambiguous situation in which we do not know what the appropriate thing to do is, we tend to copy the behavior of other

people around us. This happens to a larger extent if the other people are somehow similar to us. Imagine that you are visiting a foreign city and you get hungry. In the city square there are a few terraces that sell food. On which terrace are you going to sit and eat? You know absolutely nothing about any restaurant. Are you going to sit on the terrace that has *only one table occupied* or at the one where *only two tables are free*? Very likely you will choose to sit on the one where many other people are already sitting on. If other people sat there it means that they know that there the food is good. At the same time, you have absolutely no reliable information on the reasons that led those people to sit on that terrace. You imply that they know something, but you have no proof of it.

Other times, we do what other people do simply because we want to fit in a group. If at your office there is a money collection for, say donating to the local animal shelter, and many of your colleagues are giving ten euros, very likely you will also give ten euros despite the fact that this month you are short on cash. You need to fit in with the relevant social group of co-workers and this makes you behave similar to them. These are some illustrations of how human behavior is impacted by the *social influences dimension*.

Another characteristic of *human nature* is that we are biological creatures and have biological needs. If you have ever gone shopping while being hungry you have probably noticed that you have bought a lot more than you planned and needed. Very likely you have realized this only after you arrived home and eat something. Hunger creates an approach state of mind. We want to *get* food and this makes us buy more things. The most interesting thing is that when hungry not only do we buy more food items, but also more nonfood items. *Human nature* also includes our emotional states, our feelings. Sometimes we experience very powerful emotions such as fury or bliss. When we are under the influence of strong emotions, most of our behavior is very different from the behavior we exhibit when we are in a *cool* state of mind. If you are furious because your boss didn't keep his word on sending you to that conference, don't write him an e-mail saying that his is a low life creature. Even if taking out all your fury makes perfect sense on the moment, in a couple of days you will regret the bad words you addressed him. These biological and emotional influences on our judgment and behavior are transient. Usually people are not hungry for long periods of time and thankfully we are not furious for more than a couple of hours. Most often we are blind to their influences and, in general, we are almost incapable of predicting their impact on our behavior and judgment. All these influences on behavior belong to the *Personal Internal State dimension*.

The fourth dimension of the *4D Model of Human Behavior* covers the influences of the *physical environment*. One such category of influences concerns our senses. Throughout the long evolutionary process humans have developed ways in which to perceive the surrounding environment through the five senses. Although the environment in which we live now is very different from the one in which our very distant ancestors lived, our senses serve us quite well. However, the reactions and psychological mechanisms that are triggered by our senses are the same as tens of

thousands of years before. For example, for our very distant ancestors food was scarce and ingesting and digesting as much highly nutritious food as it was possible to find was perfectly natural. This is why we like sweet or fatty foods. In today's world such drives to eat fat and sugar are not exactly useful and this is because today, at least in the western world, highly nutritious food is abundant. A related illustration is that of the influence the smell of freshly baked bread has on purchasing behavior. When smelling the freshly baked bread our sense of smell *tells* the digestive system to get ready for a treat. Digestion begins, but if there is no actual ingestion, the sensation of hunger occurs. In turn, hunger changes our thinking by inducing the *approach mindset* and this, in turn, leads to us buying and spending more.

Let's go back a bit to Dana's unsatisfactory presentation. You have learned earlier that the lack of quality was not due to *whom* Dana *is* as a person, but rather those *social factors*, *physical influences* and a change in her *internal state*, both physical and emotional, were much stronger than her personality. If you are a marketer, don't you think this is the case for your clients' behavior? If you are a policy maker, don't you think that this is the case for the citizens you work for? If you are in a management position, don't you think that this is the case for your employees? Don't you think that all these three types of forces influence their behavior to a larger extent than do their personality traits? *Who* you client, citizen, employee etc. *is* might give you a base-line long term pattern of behavior, but actions and instance of behavior are influenced mostly by the other three dimensions from the *4D Model of Human Behavior*. Discarding any of the four dimensions from the *4D Model of Human Behavior* is equivalent with *ignoring human nature*.

In order to get a better understanding of the *4D Model of Human Behavior* we should acknowledge that human behavior is influenced by factors that are internal – belong to the individual exhibiting the behavior – and external – belong to the environment. The internal factors can be grouped into two major categories: permanent and transient. The permanent internal factors that influence behavior come from who the person is, or simply put from the individual's personality. The transient factors refer to temporary individual states such as hunger, fatigue, strong emotions etc. They belong to the Personal internal state dimension of the model.

External factors that influence behavior can be grouped into two major categories: social and physical influences. The social factors represent all the influences on behavior that originate from other people. The physical factors represent all the influences on behavior that originate in the physical environment, independent of other people's behavior. The table below summarizes the four categories of influences on human behavior. Figure 1 offers a graphical representation of the *4D Model of Human Behavior.*

Table 1. Categories of influences on human behavior

Internal		External	
Permanent	**Temporary**	**Social**	**Physical**
Personality (individual differences) Patterns Stable throughout time	**Personal Internal State** Emotions Physical state (visceral influences) Body Posture and Movement (embodied cognition)	**Social Influences** Peer Influences (imitation) Authority Influences Social Competition (status race)	**Environment Influences** Choice Architecture Physical & Sensorial factors

Figure 1. The 4D Model of Human Behavior

Structure of the book

The first section of the book – How We Think – takes you on a journey in the land of human judgment and decision making. The aim of this section is to provide you with the knowledge on how we think which will be the base of understanding of how social factors, transient internal states and physical environment elements influence human behavior.

Sections two through six of the book describe in detail the *4D Model of Human Behavior*. Particular attention is given to the drivers of human behavior other than personality. Section two describes the social influences on human behavior covering the topics of peer influences (social pressure and social proof), influences of figures of authority, social competition and reciprocity. This section is spiced with insights from evolutionary psychology. Section three describes how the personal internal (transient) state influences behavior and judgment. The section covers the topics of self-control, visceral influences, embodied cognition (how body posture and movement influences behavior) and transient states of mind. The physical influences dimension of the *4D Model of Human Behavior* is described in sections four and five. Section four is dedicated to influences of the physical – sensorial environment on human behavior. Section five is dedicated to choice architecture describing how choice is influenced by the composition and design of the choice set.

Section six is dedicated to the influences of personality (who a person is) on behavior, more particularly on long term patterns of behavior. This section is less counterintuitive than the ones dedicated to the other three dimensions of the *4D Model of Human Behavior.* Accepting the general view that what a person does is due to whom that person is, *It makes sense* that personality traits actually influence behavior. Section seven criticizes the established way of offering incentives and applying penalties in order to influence behavior and covers the topic of creating behavioral change through application of knowledge from behavioral and decision sciences. Enjoy the book! Many things will *make sense* after reading it!